DOCUMENT RESUME

ED 326 797 CG 023 007

AUTHOR Alwitt, Linda F.
TITLE Attitude Strength: An Extra-Content Aspect of Attitude.
PUB DATE Aug 90
NOTE 49p.; Paper presented at the Annual Convention of the American Psychological Association (98th, Boston, MA, August 10-14, 1990).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS College Students; Higher Education; *Student Attitudes
IDENTIFIERS *Attitude Strength

ABSTRACT

Attitude strength is considered as an extra-content aspect of attitude. A model of the relationship of attitude strength to attitude direction and behavior proposes that attitude strength is comprised of three dimensions that moderate the relationship between attitude direction and behavior. The dimensions are parallel to the tripartite dimensions of attitude content: cognitive, affective, and conative. A survey of attitudes and usage of fast food restaurants was completed by graduate and undergraduate business students (N=96). Respondents rated their beliefs about going to fast food restaurants; overall liking of a particular chain; evaluation how each of 17 attributes applies to the chain; and perceptions of how well others think of them when they go to the chain in six usage situations. Evidence from four analyses of usage and attitudes about a fast food restaurant generally support the model. The research is somewhat limited in scope and methodology. Because attitude strength measures used in the current research may have confounded theoretically-based distinctions and method, a multitrait-multimethod approach might provide further evidence about dimensionality of attitude strength. (Author/ABL)

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Attitude Strength: an Extra-content Aspect of Attitude

Linda F. Alwitt*
Department of Marketing
DePaul University

Contact: Linda F. Alwitt
Address: Department of Marketing
DePaul University
243 South Wabash Ave.
Chicago, IL 60604-2302
Phone: (312) 362 - 8646
FAX: (312) 362 - 5322

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* Correspondence should be addressed to Linda F. Alwitt, Assistant Professor of Marketing, Department of Marketing, DePaul University, 243 S. Wabash Ave., Chicago, IL 60604-2302. The author thanks Dan Romer, Paul Prabhaker, and Robert E. Pitts for their comments on earlier drafts of this paper.

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Linda F. Alwitt

Department of Marketing

DePaul University

Attitude strength is considered as an extra-content aspect of attitude. A model of the relationship of attitude strength to attitude direction and behavior proposes that attitude strength is comprised of three dimensions that moderate the relationship between attitude direction and behavior. The dimensions are parallel to the tripartite dimensions of attitude content: cognitive, affective and conative. Evidence from four analyses of usage and attitudes about a fast food restaurant generally support the model.

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Attitude Strength: an Extra-content Aspect of Attitude

Among the most influential trends in attitude research among marketers are the tripartite theory (e.g., McGuire 1985) and expectancy-value theory (Fishbein & Ajzen 1975; Rosenberg 1956). The tripartite theory has been supported by experimental evidence for its validity (e.g., Breckler 1984; Bagozzi, Tybout, Craig & Sternthal 1979), but recently it has been derided as "tired" (McGuire 1989) and alternative approaches have been suggested (e.g., Cacioppo, Petty & Geen 1989). In practice, the cognitive component of the tripartite theory has received the most attention, particularly through the expectancy-value approach to attitude. The expectancy-value approach has generated a lot of research among marketers (see Sheppard, Hartwick & Warshaw 1988 for a review). The widely-applied expectancy-value approach is valuable because it offers marketers direction to increase positive attitudes to a brand. However, attitude models specifically developed for marketing may be more predictive of consumer behavior (Warshaw 1980).

All of these approaches and most attitude research focus on the content of attitudes. Attitude content refers to beliefs, feelings and behavioral tendencies about the attitude object. This paper concerns an aspect of attitudes which does not involve attitude content. Extra-content aspects of attitude concern the results of content-free processes which influence the way attitude is manifested in behaviors toward the attitude object.

Extra-content aspects of attitude include, for example, self-perceptions of the strength of an attitude (Bem 1972), complexity of knowledge about the attitude object (Scott, Osgood & Peterson 1979) and how accessible is the attitude (Fazio 1986). Many of these extra-content aspects of attitude have been called attitude strength measures and they may be useful in explaining and predicting the relationship of attitude to behaviors toward the attitude object.

Objectives

The objective of this research is to examine three hypotheses about the extra-content aspects of attitude concerned with attitude strength. These three points require clarification before one can examine the usefulness of attitude strength for attitude-behavior relationships in marketing contexts. The three hypotheses are:

(a) Attitude strength is multi-dimensional;
(b) The dimensions are cognitive, affective and conative;
(c) Attitude strength moderates the content of attitude in its relationship with behavior.

Why Attitude Strength is Important

Extra-content aspects of attitude related to attitude strength may help marketers understand how similar attitudes may lead to different behaviors about a product or service. One's attitude

to a brand may be manifested in purchase of the brand or different ways of and occasions for consuming the brand. The various dimensions of attitude strength may differentially influence behaviors associated with the attitude object. Some dimensions may be more related to actions such as intending to purchase a product or intending to vote for a candidate. Other dimensions may be more influential on actions such as talking about the product, candidate or issue or having specific types of reactions to communications about the attitude object (e.g., Alwitt, Deighton and Grimm in press).

Previous Research on Attitude Strength

There is some previous research on the dimensionality of attitude strength as well as on the moderation of attitude-behavior relationships by specific attitude strength constructs.

Some research suggests that attitude strength has more than one dimension (Raden 1985; Abelson 1988; Krosnick 1988a,b; Judd and Krosnick 1982; Ajzen 1989). Raden (1985) reviewed numerous studies in which attitude strength had been described by different constructs. Those constructs include affective-cognitive consistency, certainty, importance, intensity, latitude of rejection, stability, crystallization, and accessibility. Since Raden found generally low correlations among strength measures, he suggests that attitude strength has different underlying dimensions. In addition, he points out that several of the measures can moderate the attitude-behavior relationship.

Three specific constructs which appear to reflect different aspects of attitude strength are conviction, structural complexity and consistency. Abelson (1988) proposes that 'conviction', the characteristic of an attitude that makes people care about it, itself includes three dimensions: ego preoccupation, emotional commitment and cognitive elaboration. He also offers evidence that high levels of conviction are related to greater stability of an attitude over time.

Ajzen (1989), Judd and Lusk (1984), Linville (1982; Linville and Jones 1980) and Scott (1969; Scott, Osgood and Peterson 1979) suggest that the complexity of attitude structure can influence the attitude-behavior relationship. Attitude structural complexity refers to the number and the inter-relatedness of dimensions of attitudinal knowledge about a domain. Linville finds that more attitude structural complexity leads to moderate judgments about an attitude object. However, Judd and Lusk find that the two components of attitudinal structural complexity interact in their effect on extremity of judgments. Specifically, more unrelated dimensions lead to less extreme judgments; more related dimensions lead to more extreme judgments. Judd and Krosnick (1982) suggest that centrality of an attitude, the links between a person and the attitude object, may make an attitude more extreme, thereby influencing the attitude - behavior relationship.

Attitude consistency may be manifested in various ways.

Judgments about beliefs may vary in consistency (Fishbein & Ajzen 1975). Affective and cognitive components of an attitude (Norman 1975; Ajzen 1989), or affective and conative attitude components (Ajzen 1989) may vary in consistency. Attitude consistency also can vary across usage situations for a product or service.

Fazio (1986) suggests that the degree to which an attitude influences behavior depends primarily upon how accessible is that attitude. Anything which enhances accessibility should increase the attitude-behavior relationship. For example, direct experience with the attitude object increases the attitude-behavior relationship (Fazio and Zanna 1981). In a study of political attitudes, Krosnick (1988a,b) offers evidence that attitudes which are important are more likely to be stable over time, and more accessible in memory. Within a consumer behavior context, Fazio, Powell and Williams (1989) argue that attitude accessibility has advantages over other moderators of attitude in its ability to predict consumer behavior. Also within a consumer context, Berger and Mitchell (1989) examine the effect of advertising repetition on non-evaluative aspects of attitude such as accessibility and confidence, and find that these extra-content aspects of attitude moderate the attitude - behavior relationship. Alwitt, Deighton and Grimm (in press) report that combinations of three types of attitudinal bonds between the person and the attitude object result in different reactions to communications about the attitude object.

In sum, previous research suggests that attitude strength is

multi-dimensional, can influence the extremity of attitudinal judgments, can moderate the effect of attitude on behavior, and can influence the way behavior to an attitude object is manifested.

A Model of Attitude Strength

How is attitude strength related to attitude content and behavior? The model proposed here suggests that attitude strength is a multi-dimensional extra-content aspect of attitude. Its dimensions reflect affective, cognitive and conative aspects of attitude strength, and they moderate attitude content in its relationship to behavior to the attitude object.

Attitude content is considered here as a non-metric evaluation of an attitude object and is operationalized in this research as positive, negative, or neutral attitude direction. As an extra-content aspect of attitude, attitude strength is a non-evaluational aspect of attitude which can be quantified and which influences the ways attitude direction is manifested in behaviors toward the attitude object.

Just as the tripartite theory of attitude has been helpful in organizing theory about attitude content, it may also help organize theory about attitude strength. This model proposes that the dimensions of attitude strength are those of the tripartite theory of attitude content: cognitive; affective; conative. To examine this hypothesis, measures were chosen to

reflect each of the three dimensions.

The set of measures chosen to reflect affective aspects of attitudes are adaptations of Abelson's (1988) three conviction scales. The three conviction scales, Ego Preoccupation, Emotional Commitment and Cognitive Elaboration, are aspects of an attitude which are experienced as feelings about the attitude rather than as beliefs about the attitude object. They are measures of extra-content aspects of attitude because they depend neither on the attitude direction nor on the specific beliefs and knowledge held by a person about the attitude object.

The set of measures chosen to reflect cognitive aspects of attitudes is concerned with the structure of beliefs about the attitude object. It involves structural complexity, which is "the number of considerations independently brought to bear by a person in appraising a set of objects" (Scott et al 1979, p.69). One might expect that people who know more about a given attitude object would have a larger number of independent considerations they would bring to bear on their actions toward the attitude object, although their attitudes may be less extreme (Judd & Lusk 1984). Structural complexity has been used to address the effect of personality on consumer behavior. For example, Zinkhan and Biswan (1988) adopted a repertory grid approach to assess cognitive complexity for consumers. Their scales, however, appear to be more related to product imagery than to product benefits and consequences.

The set of measures chosen to reflect conation is concerned with a pre-condition for actions toward the attitude object based on the attitude. In order for a person to act on his attitude, the basis for the attitude should show some form of consistency (e.g., Norman 1975; Ajzen 1989). Two forms of consistency are examined in this research, the consistency of evaluations of attributes of the attitude object, and the consistency of perceptions of intentions across behavioral situations. Consistency of evaluations of attributes is an appropriate measure of extra-content aspects of attitude because attitudes are associated with many beliefs, some of which may conflict. To the extent that beliefs are consistent with each other, they preclude alternative paths of action. Note that the content of the beliefs is not relevant to this measure. Consistency of intentions across usage situations is parallel to the argument that personality trait-behavior relationships are best observed when measured over more than one occasion (Epstein 1979; Lastovicka and Joachimsthaler 1988).

In all, seven measures of attitude strength are used to examine the hypotheses that attitude strength is multidimensional and that the dimensions are affective, cognitive and conative. There are three affective measures, two cognitive measures, and two conative measures.

The model suggests that attitude strength moderates attitude direction in its effects on behaviors to the attitude object. This model of attitude strength and its relationship to attitude

direction and to behavior is shown in Figure 1.

Insert Figure 1 about here

Research Approach

At least four kinds of evidence can support the thesis that attitude strength is multidimensional. First, the pattern of inter-correlations of different attitude strength measures should result in more than one factor. Second, the effects of attitude strength measures may differ in their effects on the relationship between an attitude and a specific behavior. That is, a measure might influence the strength of the attitude direction -behavior relationship as would an ANOVA main effect or it might influence the form of the attitude-behavior relationship as would an ANOVA interaction. Third, a path analysis should support the existence of more than one dimension. Fourth, attitude strength measures should differ in their effects on different behaviors to the attitude object.

A survey of attitudes to going to McDonald's restaurant is used to develop the attitude strength measures. Three analyses examine hypotheses about attitude strength. A factor analysis of the attitude strength measures offers one source of evidence about the dimensionality of attitude strength. A moderator analysis of the effect of attitude strength measures on the

attitude direction-behavior relationship examines the type of relationships of attitude strength measures to behavior. A path analysis examines the relationships of dimensions of attitude strength to attitude content (represented by attitude direction) and behavior.

The attitude in this research is toward going to the fast food restaurant McDonald's, a well-established familiar brand. Most people have both developed an attitude and had direct experience with this brand. Because past direct experience is an important antecedent of behavior for an established brand (e.g., Fazio 1986; Bagozzi 1981), the attitude-behavior relationship examined in the moderator analysis is between attitude direction and past usage of this brand.

A fourth analysis offers suggestive evidence about the differential effects of attitude strength dimensions on different behaviors to the brand.

Method

Subjects

A survey of attitudes and usage of fast food restaurants was completed by 96 graduate (MBA) and undergraduate marketing students as part of a course. Almost all of the students work. The majority (88%) are between the ages of 18 and 30. Fast food restaurants are a service which is familiar to and

used by students; 98% of the respondents had visited one in the past four weeks.

Measurement

The survey concerned usage of and attitudes toward fast food restaurants and McDonald's restaurant in particular. Seventy-two per cent of the students were self-reported users of the brand, defined as visitors in the past four weeks.

Nine-point Likert-type rating scales were used throughout the survey. Respondents rated the following types of items:

1. Beliefs about 17 attributes of going to fast food restaurants;
2. Overall liking of McDonald's restaurant;
3. Evaluations of how each of the 17 attributes describes going to McDonald's;
4. Perceptions of well how others think of them when they go to McDonald's in six usage situations (e.g., 'when I go with friends'; 'when I go with children').

Consistent with its definition as an indicator of attitude content, attitude direction to the brand was recoded from the overall liking scale as positive, neutral or negative.

Eight attitude strength measures were constructed from the

survey. The measures included three 'Abelson conviction' scales (Ego Preoccupation; Emotional Commitment; Cognitive Elaboration), two consistency measures (Evaluation Consistency; Situation Consistency), two aspects of structural complexity (Number of Salient Belief Dimensions; Inter-relatedness of Belief Dimensions), and attitude Intensity.

The affective attitude strength measures, Ego Preoccupation, Emotional Commitment and Cognitive Elaboration , were measured by adapting nine of Abelson's (1988) 'conviction' items, three for each scale, to the act of going to McDonald's (see Appendix A). The scales, consisting of three items each, show moderate internal consistency. Coefficient alpha is .68 for Ego Preoccupation, .52 for Emotional Commitment and .56 for Cognitive Elaboration.

The two conative attitude strength constructs, Evaluation Consistency and Situation Consistency, are measured by variability. Evaluation consistency is the standard deviation of ratings of the 17 evaluation statements within subjects. A low standard deviation indicates higher consistency of the evaluation statements for a respondent. Situation consistency is the within-subject standard deviation of ratings of perceptions of others about the respondent's use of McDonald's in six different situations. A low standard deviation indicates higher consistency across situations.

The two cognitive attitude strength measures are indicators of

structural complexity. Scott et al (1979) and Linville (1982) measure structural complexity by H, the index of dispersion used in information theory. The advantage of this index is that it combines the number and independence of dimensions. The two measures of structural complexity used here measure the number and the independence of belief dimensions separately. One, the Number of Salient Dimensions, reflects the number of sets of attributes consumers consider when deciding to go to a fast food restaurant. The other, the Inter-relatedness of Dimensions, reflects the independence of those Dimensions. The advantage of these measures over the index of dispersion, H, is that it can be used easily in typical marketing research surveys.

The Number of Salient Dimensions was derived as follows: (1) Three fast food belief dimensions were identified from an orthogonal factor analysis of beliefs about going to a fast food restaurant using a varimax rotation. These dimensions reflect the structure of beliefs across respondents. (2) The 17 belief ratings were standardized within respondents to create relative ratings without yea- or nay-saying bias. (3) The standardized belief ratings were unit-weighted to form three scales of beliefs, one for each of the dimensions identified in the across-subject factor analysis. (4) The scores of each respondent on each dimension resulted in a frequency distribution for each belief dimension across the respondents. (5) A salient belief dimension for each subject was defined as below the second quartile or above the third quartile for each of the three belief dimensions on its frequency distribution. The Number of Salient

Dimensions can range from 0 to 3 for each subject. Since the number rather than the content of the scales is of interest, the content of the belief scales themselves is not discussed.

The second aspect of structural complexity, Inter-relatedness of Dimensions, is the variability of the belief dimensions. It was measured by the standard deviation of the three belief dimension scores for each respondent. High variability means the dimensions of reasons for going to fast food restaurants are more independent of each other. One might expect more independent dimensions among more experienced and knowledgeable users of fast food restaurants.

Attitude Intensity was operationalized as a five-point scale recoded from the folded overall measure of liking the brand, in which a high level indicates greater positive or negative attitudinal intensity. It is included because it is the most widely used measure of strength in attitude studies.

One behavioral measure is the reported usage of McDonald's restaurant in the past four weeks. This is the dependent variable for the moderator analysis and is one measure of behavior in the path analysis. The other measure of behavior in the path analysis is intended use of McDonald's at the next visit to a fast food restaurant.

In addition, two other behavioral measures were obtained from 40 of the respondents. They rated their liking of McDonald's

advertising and of McDonald's promotions such as games and offers.

Results

Factor Analysis of Attitude Strength Measures

If attitude strength is unidimensional, one would expect the eight attitude strength measures to load on a single factor in a factor analysis. This is not the case. The eight attitude strength measures were entered into a common factor analysis, and four factors had eigenvalues greater than one. While all four factors account for 73% of the common variance, each accounts for a substantial proportion of variance. Table 1 shows the proportions of variance accounted for by each factor and the varimax-rotated loadings of the eight attitude strength measures on each factor. These results suggest that attitude strength is multidimensional.

Insert Table 1 about here

Factor 1 is the Affective factor, with high loadings of the three Abelson conviction scales. Consistency of evaluations of about going to McDonald's and consistency of beliefs about social perceptions across usage situations have high loadings on Factor 2, the Conative factor. Factor 3, the Cognitive factor

has high loadings of the Number of Salient Dimensions and Inter-relatedness of Dimensions. Specifically, this factor reflects more salient dimensions and more independence of those dimensions. Thus a high factor score on the Cognitive factors indicates numerous orthogonal importance dimensions. Factor 4 is the Intensity factor, with only one high loading, attitude Intensity.

While the structure of the three factors clearly reflects the affective, cognitive and conative bases for attitude strength, the factors also may be partially due to within-factor similarities in methodology. The three Abelson conviction scales are certainly methodologically similar. However, Inter-relatedness of Dimensions is a measure of variability just as are the two consistency measures but they load on different factors. Thus methodology does not completely explain the composition of the factors. A multitrait-multimethod approach to attitudinal strength dimension structure might be appropriate to clarify this structure. In light of the possible confounding of content and methodology of the attitude strength measures, the results of the factor analysis offer only partial support for the hypothesis that attitude strength is a multidimensional concept.

In an oblique factor analysis, the Affective and Cognitive factors are moderately negatively correlated (r=-.33). That is, respondents who think a lot about the brand, have high ego preoccupation with it and are emotionally committed to it would tend to have fewer but more inter-related dimensions about the

importance of fast food restaurants as a category. This result is consistent with the idea that less frequent fast food restaurant users are more familiar with and less critical of this particular brand of fast food restaurant because it is the fast food restaurant they know best and use most often. That is, McDonald's position as the product category leader makes it more familiar to less frequent fast food restaurant users.

Moderation of the Attitude Direction - Behavior Relationship by Attitude Strength Dimensions

The hypothesis that attitude strength measures moderate attitudinal direction in its relationship to behavior is tested with a moderator analysis. A variable must fulfill three criteria in order to moderate the relationship between two other variables. First, the moderator variable, an attitude strength measure, must not be directly related to the predictor variable, attitude direction. To the degree it <u>is</u> correlated with attitude direction, the attitude strength measure has the same effect on behavior as does attitude direction. Second, the moderator strength measure must not be correlated with the dependent variable, behavior. To the extent that it <u>is</u> correlated with behavior, it is independent of any relationship of attitude direction with behavior. Third, the interaction of the moderator variable, an attitude strength measure, with the predictor variable, attitude direction, should have a significant correlation with the dependent variable, behavior.

An analysis of correlations of attitude strength measures with attitude direction and behavior indicates that five of the attitude strength measures qualify as moderators. The other three attitude strength measures, Emotional Commitment, Ego Preoccupation and the Number of Salient Dimensions do not qualify as moderators of attitude direction in its relationship with behavior. The Number of Salient Dimensions is directly related to behavior rather than a moderator of the attitude direction - behavior relationship. Since Emotional Commitment and Ego Preoccupation are correlated positively with attitude direction, they cannot moderate direction.

The five attitude strength measures which moderate the relationship of attitude direction with McDonald's usage fulfill Raden's (1985) criteria for attitude strength measures as moderators. They show no significant correlations with attitudinal direction nor with usage of this restaurant in the past four weeks (see columns 1 and 2 of Table 2). However, in interaction with attitudinal direction, the correlations of each of the five measures with usage are significantly different from zero (column 3 of Table 2). In addition, they fulfill another of Raden's criteria: more than one factor emerged from the factor analysis.

Insert Table 2 about here

Sharma, Durand and Gur-Arie (1981) classify a moderator of the form of a relationship between two other variables a "pure moderator". A pure moderator is not correlated with either the dependent variable nor the predictor variable, but it interacts with the predictor variable in its relationship with the dependent variable. Sharma et al suggest a set of three regression analyses can detect this interaction. In Model 1 there is a single predictor variable, attitude direction. In Model 2, the predictor variables are attitude direction and the attitude strength variable. In Model 3, the predictor variables are attitude direction, the attitude strength variable, and their interaction.

Only one attitude strength measure, Cognitive Elaboration, satisfies criteria for a pure moderator. Cognitive Elaboration modifies the form rather than the strength of the relationship between attitude direction and McDonald's usage. While it is not related to either the dependent variable, use of McDonald's, nor the predictor variable, attitude direction, Cognitive Elaboration interacts with attitude direction (see Table 2). Table 3 shows the results of logistic regressions for all of the attitude strength variables. The standardized beta weight for the interaction of attitude direction with Cognitive Elaboration is the only marginally significant interaction ($p = .07$), and it directionally supports the hypothesis that Cognitive Elaboration is a pure moderator of the relationship between direction and behavior.

Respondents who perceive themselves as low in Cognitive Elaboration about the brand have a stronger attitude direction - usage relationship than do respondents who perceive themselves as high in Cognitive Elaboration. This result is consistent with the idea that for people who think little about the choice of a fast food restaurant, their attitude functions as a summary evaluation, an heuristic. For these people, attitude direction should and does have a strong relationship with usage.

Insert Table 3 about here

Four attitude strength variables, Inter-relatedness of Dimensions, Evaluation Consistency, Situation Consistency, and Intensity, moderate the strength rather than the form of the attitude direction - usage relationship. As "homologizer moderators" (Sharma et al 1981), they are related to neither the predictor variable, attitude direction nor the dependent variable, usage (see Table 2) and there is no interaction with attitude direction in their relations to usage (see Table 3). In addition, a strong test verifies their status as "homologizer moderators" (Sharma et al 1981). Specifically, median-split subgroups based on levels of the attitude strength variables have significantly different correlations of attitude direction with McDonald's usage: Inter-relatedness of Dimensions ($z = 2.73$, $p < .005$); Evaluation Consistency ($z = 1.91$, $p < .10$); Situation

Consistency ($z = 2.06$, $p < .05$); Intensity ($z = 3.42$, $p < .005$).

The Number of Salient Dimensions does not moderate the effect of attitude direction on behavior but rather, is directly related to brand usage ($r=.25$). Specifically, a respondent who has fewer salient dimensions about why he visits fast food restaurants is more likely to use McDonald's. This result is consistent with the idea that infrequent fast food restaurant users, who probably know less about those restaurants, are more likely to use the category leader than its competitors.

Path Analyses to Test the Proposed Model

Insert Figures 2 and 3 and Table 4 about here

In order to test the entire model, path analyses using SAS PROC CALIS (with lineeqs and maximum likelihood options) were carried out for the proposed and an alternative model of the relationship of attitude strength measures to attitude direction and McDonald's usage. Model 1 shown in Figure 2 proposes that the three dimensions of attitude strength, cognitive, affective and conative, moderate attitude direction in its relationship to behavior. Paths from the three dimensions to behavior are included to test their direct influence. The standardized path coefficients and model fit measures are reported in Table 4.

This model fits the data on the basis of the non-significant chi square, the small root mean square residuals and the goodness of fit index. The relationship of attitude to behavior is indicated by the significant path between F4 and F5. The significant paths between F2 and F4 and between F3 and F4 suggest that affective and conative attitude strength dimensions moderate the effect of attitude direction on behavior. but none of the dimensions is directly related to behavior. These results are consistent with the previous two analyses. The alternative Model 2, shown in Figure 3, tests the hypothesis that the attitude strength measures reflect a single dimension which moderates attitude direction in relationship to behavior. The model does not fit the data adequately and none of the paths are significant. In sum, the path analyses support the hypotheses that attitude strength measures can be structured in cognitive, affective and conative dimensions and there is evidence that the latter two dimensions moderate the effect of attitude direction on behavior.

Correlations of Attitude Strength Measures with Other Behavioral Indicators

A fourth type of evidence can support the hypothesis that attitude strength measures are multidimensional: whether the measures differ in their effects on different behaviors to the attitude object. A subsample of 40 respondents rated how much they liked McDonald's advertising and McDonald's promotions such as games or special offers. While this sub-sample is too small to justify detailed analyses of the form of relationship between

attitude strength measures and these two behavioral indicators as reported for usage, an analysis of intercorrelations suggests that different attitudinal strength dimensions are associated with different behavioral manifestations. Table 5 shows correlations of attitude strength measures with direction, with liking of McDonald's advertising and promotions, and the interaction of attitude strength measures and direction with the two behavioral measures.

Insert Table 5 about here

Some of the attitude strength measures which moderate the relationship of attitude direction with past usage of McDonald's also moderate the relationship of attitude direction with liking of McDonald's advertising and/or promotions. Cognitive Elaboration is not correlated with direction, liking of advertising or liking of promotions, but its interaction with direction is significantly correlated with both liking advertising ($r = .32$) and liking the promotions ($r = .42$). Evaluation consistency moderates both usage and liking the advertising ($r = .43$). Intensity moderates both usage and liking the promotions ($r = .31$).

However, other attitude strength measures have different relationships with using McDonald's than with liking their advertising or promotions. The Number of Salient Dimensions is

not related to liking advertising or promotions either directly or as a moderator. Intensity moderates usage but not liking the advertising. Evaluation Consistency moderates usage but not liking the promotions. Situational Consistency moderates usage but neither of the other two behaviors. Inter-relatedness of Dimensions is negatively related to liking the advertising ($r = -.40$) and the promotions ($r = -.52$,).

Since the attitude strength variables examined in this research do not have the same relationship with different behaviors to the attitude object, these results offer further support for the concept of attitude strength as multidimensional.

Discussion

Dimensionality of Attitude Strength

The results of the factor analysis and path analysis support the hypothesis that attitude strength is multidimensional. Because this research is implemented on a within-subject basis rather than an across-study basis, it extends Raden's review by finding that attitude strength may be multidimensional within the same people.

More evidence that attitude strength is multi-dimensional is that not all the attitude strength measures in this research moderate that relationship in the same way. Cognitive Elaboration moderates the <u>form</u> of the attitude direction - usage

Intensity, Situational and Belief Consistency, and Inter-relatedness of Dimensions, moderate the strength of the attitude direction - usage relationship, like a main effect.

Other evidence that supports the concept of attitude strength as multidimensional is that attitude strength measures may have different relationships with different behaviors.

Tripartite Attitude Strength Dimensions

The results of this research suggest that attitude strength dimensions consist of affective, cognitive and conative dimensions, rather than a single dimension. Although the content and measurement of the dimensions may be confounded to some extent, the tripartite classification of attitude strength is consistent with the results of an attitude study conducted on another issue by Holbrook (1978). In a study about the informational determinants of attitude, Holbrook asked subjects to rate a message about a brand on ten items which can be considered extra-content aspects of attitudes about a persuasive message. They included items such as how convincing was the message, how interesting, confidence in understanding the message, persuasiveness of the message, and coherence of message arguments. These items were rated on 9-point scales and submitted to a factor analysis. The three factors from a varimax-rotated solution, accounting for 69.8% of the variance, were labeled credibility, enjoyment and confidence. An examination of the loadings on these three scales suggests that

the credibility scale reflects a cognitive component, the enjoyment reflects an affective component, and confidence reflects a confidence component.

Moderation by Attitude Strength Measures

What do the moderator attitude strength measures (Cognitive Elaboration, Inter-relatedness of Dimensions, Evaluation Consistency, Situation Consistency and Intensity) have in common? There is evidence that attitudes can be generated by one's own thoughts (Tesser 1978). The moderator strength measures may reflect a respondent's cues from his perceptions of his own thought processes (Bem 1972; Fazio, Herr & Olnay 1984). That is, the moderator attitude strength aspects may provide similar heuristic evidence to the holder of the attitude that his attitude should be acted upon. Cognitive Elaboration reflects one's perception of the act of forming an attitude. If thought results in more consistent beliefs (Tesser 1978), then the perception that one has given much thought to an attitude object might also result in consistency.

Three of the moderators, Situation and Belief Consistency and Inter-relatedness of Dimensions, reflect consistency across different components of the attitude -- situations, beliefs and evaluations. This consistency is similar to having multiple sources of support evidence or a large number of arguments in persuasion. There is evidence from studies of persuasion that the number of arguments is effective as an heuristic persuasive

cue from communications when people exert little cognitive effort (Petty & Cacioppo 1986; Chaiken 1986).

Each of these attitude strength aspects provide evidence to the holder of an attitude, albeit heuristic, that he has reasons to behave in accordance with his attitudinal direction.

Limitations and Future Directions

This research is somewhat limited ins scope and methodology. Because attitude strength measures used in the current research may have confounded theoretically-based distinctions and method, a multitrait-multimethod approach might provide further evidence about dimensionality of attitude strength. In addition, the differential effects of attitude strength measures on different behaviors toward the attitude object should be examined in more detail. Changes in the form and degree of effects of attitude strength measures on the attitude - behavior relationship when attitudes are changed also should be measured. Attitudes should be surveyed within different domains to examine the consistency of the relationships of attitude direction and attitude strength dimensions for other attitude objects.

Several potential attitude strength dimensions were not measured in this research. They include attitude accessibility, centrality, certainty, and affective-cognitive consistency. Another potential area to explore is attitude functions (e.g., Shavitt 1989) as attitudinal strength moderators of the attitude-

behavior relationship. These potential attitude strength dimensions are topics for future research.

Conclusions

This research offers evidence to support the concept that attitudinal strength is multi-dimensional, a view of attitude strength which should cause market researchers to reconsider how to measure attitude, given the issues of concern. Analyses of the structure of intercorrelations among attitude strength measures and the different ways in which attitude strength measures moderate attitude direction - behavior relationships support this conclusion. Different attitude strength measures, separately from attitude direction, may be useful to assess attitude - behavior relationships for different kinds of behaviors. Attitude strength measures are expected to be differentially predictive for different behaviors, product categories and research issues.

Appendix A

Adaptation of Abelson's (1988) Conviction Scales to McDonald's Usage

Emotional Commitment

My beliefs about McDonald's express the real me.

I think my point of view about going to McDonald's is absolutely correct.

I can't imagine ever changing my feelings about going to McDonald's.

Cognitive Elaboration

I know more about going to McDonald's than the average person.

I've held my views about going to McDonald's a long time compared to most people.

It's easy to explain my views about McDonald's.

Ego Preoccupation

My beliefs about going to McDonald's are very important to me.

I think about going to McDonald's often.

My opinion about going to McDonald's is very strong.

Table 1

Common Factor Analyses of Eight Attitude Strength Measures
(Varimax Rotation)

	Factor Loadings				Commun-ality
	1 Affective	2 Conative	3 Cognitive	4 Intensity	
Emotional commitment	.80	.12	.04	.11	.66
Ego preoccupation	.80	.05	-.13	-.21	.70
Cognitive elaboration	.80	.05	-.11	.14	.67
No. salient dimensions	-.03	.06	.83	.14	.71
Inter-relatedness of dimensions	-.12	.08	.80	-.16	.68
Evaluation consistency	-.06	.81	.06	-.24	.72
Situation consistency	.03	.87	.04	-.16	.79
Intensity	.05	.04	-.01	.95	.91
% common variance	24%	18%	17%	14%	

Table 2

Correlations of Attitude Strength Measures with Attitude Direction and McDonald's Usage, and Correlation of Attitude Strength X Direction with McDonald's Usage

	Correlations:		
Attitude Strength Measures:	Strength and Direction	Strength and McDonald's Usage	Strength x Direction with McDonald's Usage
Emotional commitment	.23[c]	-.17	-.39[a]
Ego pre-occupation	.23[c]	-.18	-.38[a]
Cognitive elaboration	.11	-.13	-.34[c]
No. salient dimensions	.03	.25[b]	-.17
Inter-relatedness of dimensions	-.12	.00	-.30[b]
Evaluation consistency	-.17	-.04	-.34[c]
Situation consistency	-.06	-.08	-.31[b]
Intensity	.03	.10	-.34[a]

[a] $p < .0001$
[b] $p < .01$
[c] $p < .05$

NOTE: McDonald's usage is coded 1 = usage and 2 = non-usage, so a negative correlation indicates a positive association between the attitude strength measure and usage.

Table 3
Summary of Logistic Regressions to Test Attitude Strength Measures as Pure Moderators

Attitude Strength Measure	Model	Chi Square(df)	Standardized Beta Weights: Direction	Attitude Strength	Direction x Strength Interaction
All	1	41.64(1)[a]	1.63[a]	--	--
Emotional commitment	2	19.05(2)[a]	1.16[a]	.17	--
	3	20.18(3)[a]	.22	-.25	.22
Ego preoccupation	2	19.22(2)[a]	1.13[a]	.17	--
	3	22.28(3)[a]	.00	-.56	.40
Cognitive elaboration	2	18.74(2)[a]	1.17[a]	.10	--[c]
	3	22.07(3)[a]	3.16[a]	.80[c]	.23[c]
No. salient dimensions	2	46.50(2)[a]	1.61[a]	-.48[b]	--
	3	47.08(3)[a]	2.12[a]	-.12	-.25
Inter-relatedness of dimensions	2	19.10(2)[a]	1.23[a]	.19	--
	3	19.54(3)[a]	1.78[b]	1.93	-1.03
Evaluation consistency	2	20.57(2)[a]	1.31[a]	.63	--
	3	21.67(3)[a]	.37	-.42	.70
Situation consistency	2	20.96(2)[a]	1.28[a]	.32	--
	3	21.77(3)[a]	1.87[b]	.95	-.38
Intensity	2	18.35(2)[a]	1.15[a]	.22	--
	3	18.60(3)[a]	1.43[b]	.09	-.15

[a] $p < .01$
[b] $p < .05$
[c] $p < .10$

Table 4

Standardized Path Coefficients for Models 1 and 2

Parameter	Model 1	Model 2
gamma 1	.009	.153
gamma 2	.255[b]	-.023
gamma 3	.138[c]	
gamma 4	.010	
gamma 5	.068	
gamma 6	.121	
beta	-.773[a]	.780
Chi square(df)	32.47(30)	124.32(39)
p	.35	.0001
Root mean square residual	.066	.275
Goodness of fit index	.937	.779

[a] $p < .0001$
[b] $p < .01$
[c] $p < .05$

Table 5

Correlations of Attitude Strength Measures with Attitude Direction and Liking McDonald's Advertising and Promotions, and Correlation of Attitude Strength x Direction with Liking Advertising and Promotions

	Correlations:				
	Strength and Direction	Strength and Advertising	Strength and Promotions	Direction x strength with: Advertising	Promotions
Attitude Strength Measures:					
Emotional commitment	.23[c]	-.08	.17	.25	.31[c]
Ego preoccupation	.23[c]	.20	.39[b]	.30	.42[b]
Cognitive elaboration	.11	.05	.29	.32[c]	.40[b]
No. salient dimensions	.03	-.11	-.04	.24	.25
Inter-relatedness of dimensions	-.12	-.40[b]	-.52[b]	.04	-.10
Evaluation consistency	-.17	-.01	-.10	.43[a]	.30
Situation consistency	-.06	-.06	-.11	.30	.19
Intensity	.03	-.15	.15	.16	.31[c]

[a] $p < .0001$
[b] $p < .01$
[c] $p < .05$

Figure Captions

Figure 1. A model of attitude strength and its relationship to attitude direction and to behavior. V1-V2 are measures of the structural complexity, V3-V5 are measures of conviction, V6-V7 are measures of consistency. F1 represents the cognitive dimension, F2 the affective and F3 the conative dimension of attitude strength. F4 is attitude direction and F5 is one behavior to the attitude object.

Figure 2. Proposed model 1 of the relationship of attitude strength to attitude direction and behavior with path coefficients. V1=No. salient dimensions; V2=Inter-relatedness of dimensions; V3=Emotional commitment; V4=Ego preoccupation; V5= Cognitive elaboration; V6 = Evaluation consistency; V7=Situation consistency; V8=past usage of restaurant; V9=intended usage of restaurant; F1=Cognitive dimension; F2=Affective dimension; F3=Conative dimension; F4 =Attitude direction; F5 = Restaurant Usage.

Figure 3. Alternative model 2 of the relationship of attitude strength to attitude direction and behavior which represents strength as unidimensional. Variables are labeled as in Figure 2.

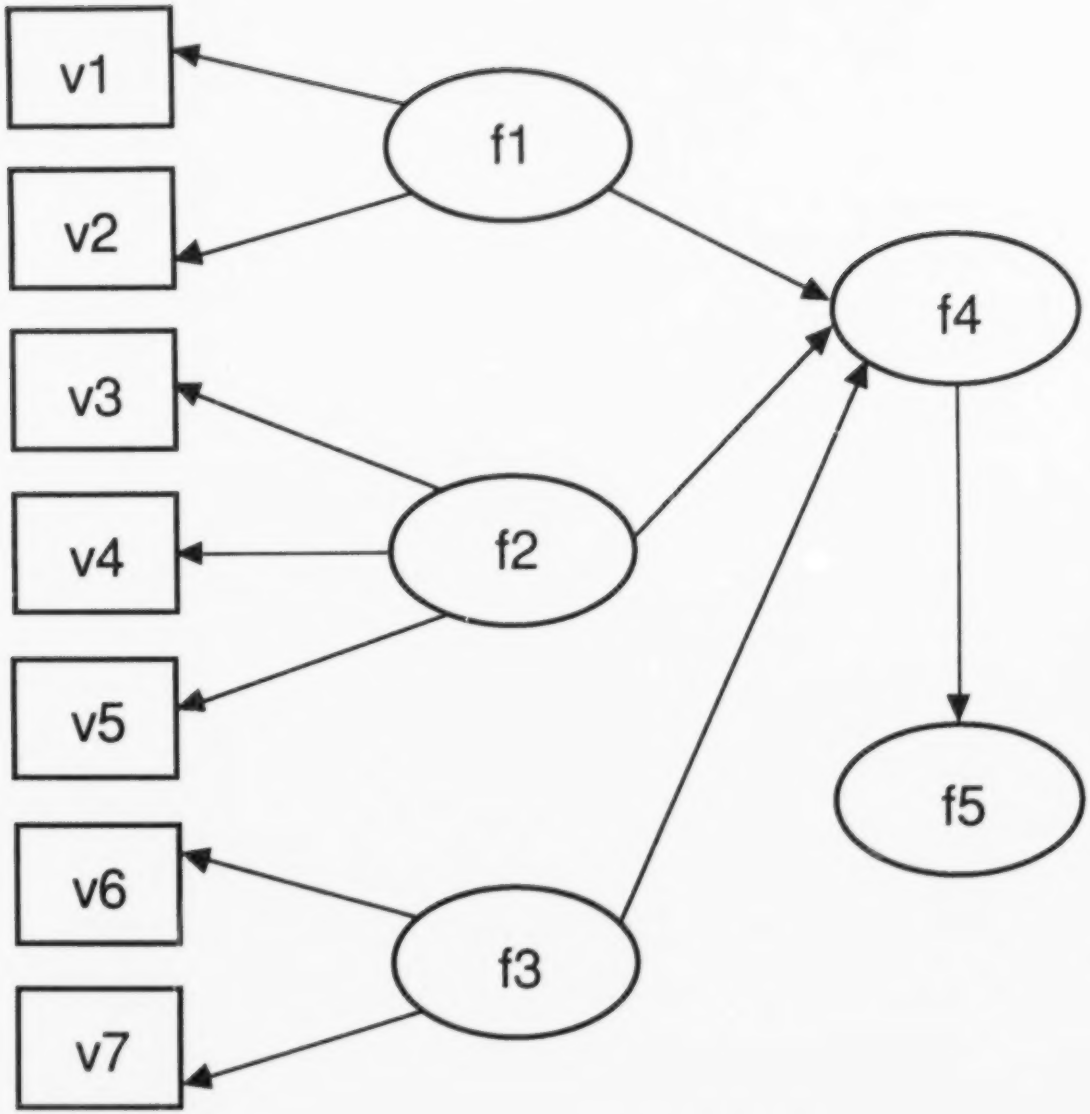
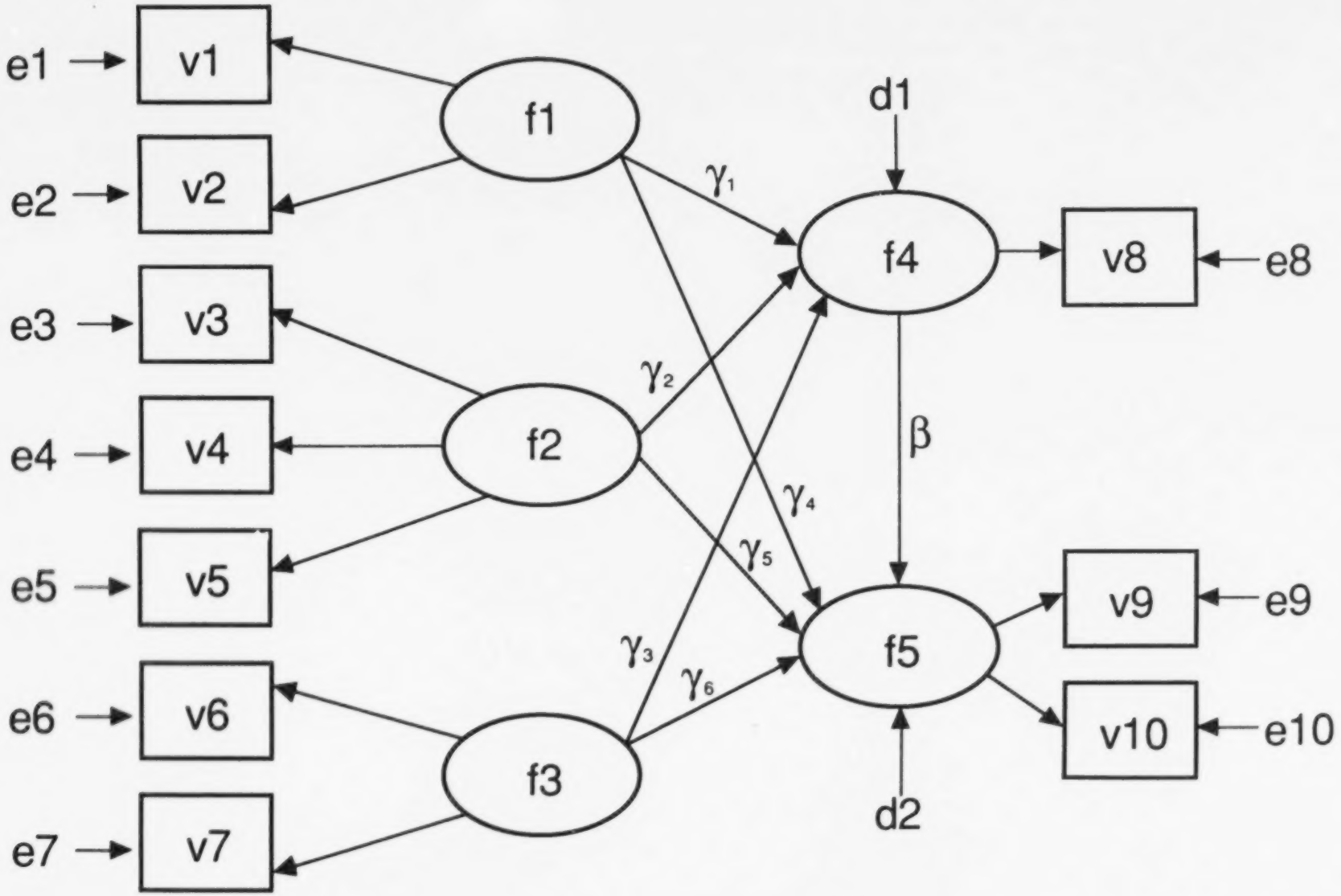


Figure 1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v1
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v2
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f2
f3
d1
f4
v8
e8
β
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γ1
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γ4
γ5
γ6

40. Figure 2

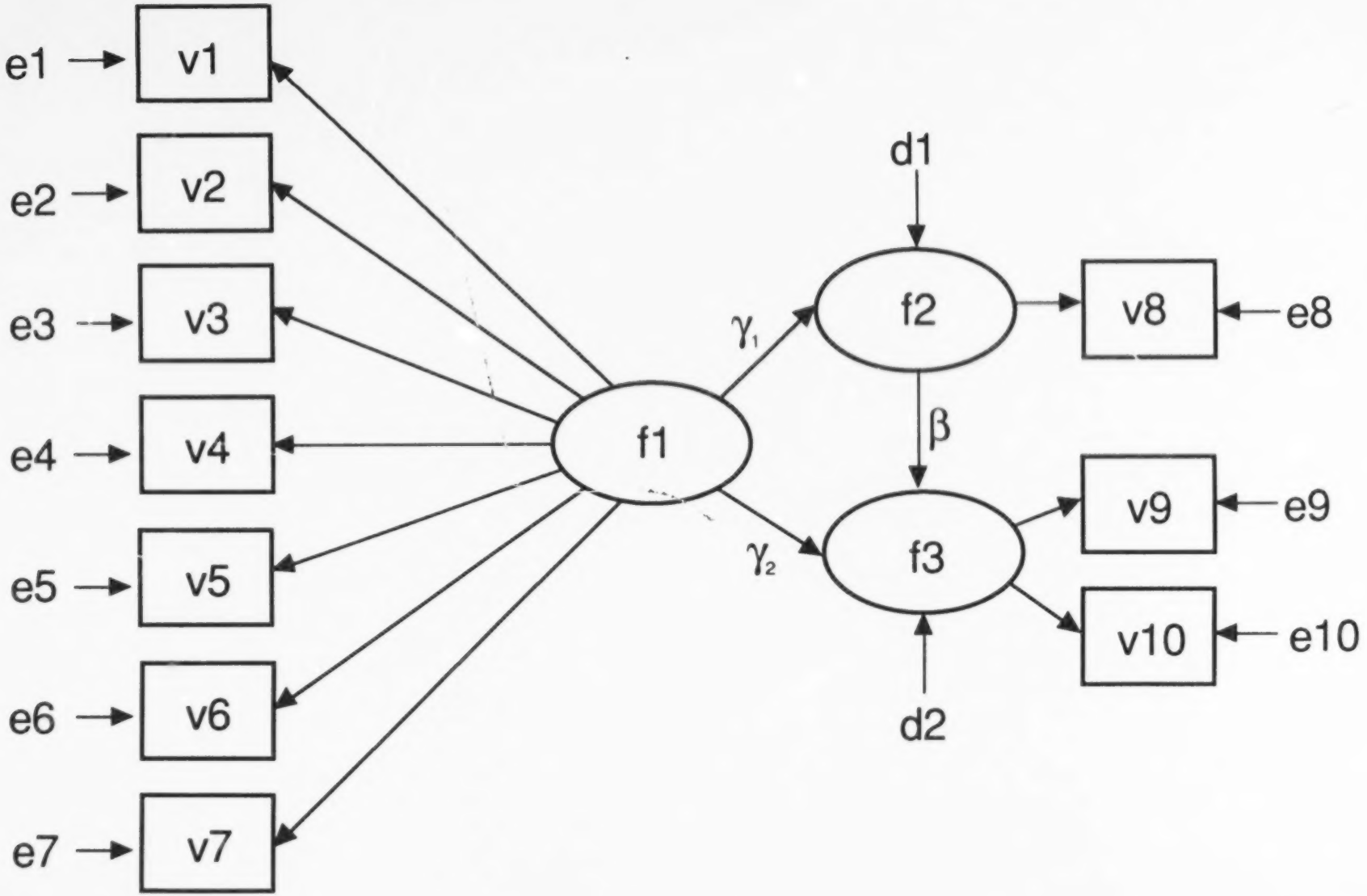

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figure 3

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References

Abelson, Robert P. (1988), "Conviction". American Psychologist, 43(4) (April), 267-275.

Ajzen, Icek. (1989), "Attitude structure and behavior", in Attitude Structure and Function, Anthony R.Pratkanis, Steven J. Breckler, & Anthony G. Greenwald eds., Hillsdale, NJ: Lawrence Erlbaum, 241-274.

Alwitt, Linda F., John Deighton and John Grimm. (in press), "Reactions to political advertising depend on the nature of the voter-candidate bond." In Television and Political Advertising, Vol 1, Frank Biocca ed., Hillsdale, NJ:Lawrence Erlbaum.

Bagozzi, Richard P.(1981) "Attitudes, intentions and behavior: a test of some key hypotheses." Journal of Personality and Social Psychology, 41(4), 607 - 627.

_____, Alice M. Tybout, C.Samuel Craig and Brian Sternthal (1979) "The construct validity of the tripartite classification of attitudes", Journal of Marketing Research, 16, 88-95.

Bem, D.J. (1972) "Self-perception theory". In Advances in Experimental Social Psychology, L. Berkowitz ed, New York: Academic Press.

Berger, Ida E. & Andrew A. Mitchell. (1989) "The effect of advertising on attitude accessibility, attitude confidence, and the attitude-behavior relationship", Journal of Consumer Research, 16 (December), 269-279.

Breckler, Steven, J. (1984) "Empirical validation of affect, behavior, and cognition as distinct components of attitude", Journal of Personality and Social Psychology, 47(6),1191-1205.

Cacioppo, John T., Richard E. Petty and Thomas R. Geen, "Attitude structure and function: from the tripartite to the homeostasis model of attitudes", In ttitude Structure and Function Anthony R. Pratkanis, Steven J. Breckler, & Anthony G. Greenwald eds., Hillsdale, NJ: Lawrence Erlbaum, 275-309.

Chaiken, Shelly (1986) "The heuristic model of persuasion". In Social Influence:the Ontario Symposium, vol 5, M. Zanna, J.M. Olson and C.P. Herman eds., Hillsdale, N.J.: Lawrence Erlbaum.

Epstein, Seymour. (1979) "The stability of behavior: I. On predicting most of the people much of the time", Journal of Personality and Social Psychology, 37, 1097-1126.

Fazio, Russell H. (1986), "How do attitudes guide behavior? In Handbook of Motivation and Cognition, Richard M.

Sorrentino and E. Tory Higgins eds., New York:Guilford Press, 204-243.

----------, Paul M. Herr, and Timothy J. Olney(1984) "Attitude accessibility following a self-perception process", Journal of Personality and Social Psychology, 47, 277-286.

_____, _____ and Carol J. Williams (1989) "The role of attitude accessibility in the attitude-to-behavior process", Journal of Consumer Research, 16 (December), 280-288.

---------- and Mark P. Zanna (1981) "Direct experience and attitude-behavior consistency". In Advances in Experimental Social Psychology, Vol. 14, Berkowitz, L. ed., 161-202.

Fishbein, Martin & Icek Ajzen.(1975), Belief, Attitude, Intention and Behavior, Reading, MA: Addison-Wesley.

Holbrook, Morris R. (1978) "Beyond attitude structure: toward the informational determinants of attitude", Journal of Marketing Research, 15, 545-556.

Judd, Charles M. & Jon A. Krosnick (1982), "Attitude centrality, organization, and measurement", Journal of Personality and Social Psychology, 42(3), 436-447.

_____, and Cynthia M. Lusk (1984), "Knowledge structures and evaluative judgments:effects of structural variables on

judgmental extremity", Journal of Personality and Social Psychology, 46, 1193-1207.

Krosnick, Jon A. (1988a), "The role of attitude importance in social evaluation: a study of policy preferences, presidential candidate evaluations, and voting behavior", Journal of Personality and Social Psychology, 55(2), 196-210.

---------(1988b) "Attitude importance and attitude change", Journal of Experimental Social Psychology, 24, 240-255.

Lastovicka, John L. and Erich A. Joachimsthaler. (1988) "Improving the detection of personality-behavior relationships in consumer research". Journal of Consumer Research, 14 (March), 583-587.

Linville, Patricia W. (1982), "The complexity-extremity effect and age-based stereotyping", Journal of Personality and Social Psychology, 42(2), 193-211.

_____ and Edward E. Jones (1980), "Polarized appraisals of outgroup members", Journal of Personality and Social Psychology, 38(5), 689-703.

McGuire, William J.(1989) "The structure of individual attitudes and attitude systems", In Attitude Structure and Function, Anthony R.Pratkanis, Steven J. Breckler, & Anthony G.

Greenwald eds., Hillsdale, NJ: Lawrence Erlbaum, 37-69.

---------(1985) "Attitudes and attitude change". In The Handbook of Social Psychology, 3rd ed., Lindzey and E. Aronson eds., New York: Random House,233-246.

Norman, Ross (1975), "Affective-cognitive consistency, attitudes, conformity, and behavior, Journal of Personality and Social Psychology, 32, 83-91.

Petty, Richard E. & John T. Cacioppo (1986) Communication and persuasion:central and peripheral routes to persuasion. New York: Springer-Verlag.

Raden, David (1985), "Strength-related attitude dimensions", Social Psychology Quarterly, 48(4), 312-330.

Rosenberg, M.J.,(1956) "Cognitive structure and attitudinal affect", Journal of Abnormal and Social Psychology, 53, 367-372.

Scott, William A.(1969), "Structure of natural cognitions", Journal of Personality and Social Psychology, 12(4), 261-278.

_____, D.Wayne Osgood and Christopher Peterson (1979), Cognitive Structure:Theory and Measurement of Individual Differences, New York: Wiley.

Sharma, Subhash, Richard M. Durand and Oded Gur-Arie, (1981) "Identification and analysis of moderator variables", Journal of Marketing Research, 18 (August), 291-300.

Shavitt, Sharon (1989), "Operationalizing functional theories of attitude". In Attitude Structure and Function, Anthony R. Pratkanis, Steven J. Breckler, & Anthony G. Greenwald eds., Hillsdale, N.J.: Lawrence Erlbaum, 311-338.

Sheppard, Blair H., Jon Hartwick and Paul R. Warshaw (1988), "The theory of reasoned action: a meta-analysis of past research with recommendations for modifications and future research", Journal of Consumer Research, 15 (December), 325-343.

Tesser, Abraham (1978) "Self-generated attitude change". In Advances in Experimental Social Psychology, Vol. 11, L. Berkowitz ed., 289 - 338.

Warshaw, Paul R. (1980) "A new model for predicting behavioral intentions: an alternative to Fishbein", Journal of Marketing Research, 17 (May), 153-172.

Zinkhan, George M. & Abhijit Biswan (1988), "Using the repertory grid to assess the complexity of consumers' cognitive structures", in Advances in Consumer Research, Vol 15, Richard Lutz ed., 493-497.